

REMARKS

I. Introduction

Claims 11 to 20 and 24 are currently pending. Claims 11, 12, 16, 17 and 24 have been amended. In view of the forgoing amendments and following remarks, it is respectfully submitted that claims 11 to 20 and 24 are allowable, and reconsideration is respectfully requested.

II. Rejection of Claim 24 under 35 U.S.C. § 112, second paragraph

Claim 24 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. Claim 24 has amended to recite “**wherein the power line structure is not used to transmit information that is transmitted during the at least one event window.**” Furthermore, base claim 17 has been amended to recite “**at least one time window for transmitting a first set of the information** at specific points in time and **at least one event window for transmitting a second set of the information, which is different from the first set of information.**” Accordingly, claim 24 is in compliance with 35 U.S.C. § 112, second paragraph. Withdrawal of the indefiniteness rejections is therefore respectfully requested.

II. Rejection of Claims 11, 12, 15-17, 20 and 24 under 35 U.S.C. § 103(a)

Claims 11, 12, 15-17 and 20-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent App. No. 2001/0021196 (“Weigl”) in view of U.S. Patent No. 6,404,326 (“Timmerman”). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, the Examiner must show, *inter alia*, that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references, and that, when so modified or combined, the prior art teaches or suggests all of the claim limitations. M.P.E.P. §2143. In addition, as clearly indicated by the Supreme Court, it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to [modify] the [prior art] elements”

in the manner claimed. See KSR Int'l Co. v. Teleflex, Inc., 82 U.S.P.Q.2d 1385 (2007). In this regard, the Supreme Court further noted that "rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Id., at 1396. To the extent that the Examiner may be relying on the doctrine of inherent disclosure in support of the obviousness rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Independent claim 11 has been amended to recite, in relevant parts:

transmitting the information in **successive, pre-allocated communication cycles** over the data bus structure, each cycle of the successive cycles including **at least one time window for transmitting a first set of the information** at specific points in time and **at least one event window for transmitting a second set of the information, which is different from the first set of information**, in response to specific events; and

contemporaneously with the transmitting of the first set of the information in the at least one time window, **transmitting at least one portion of the first set of the information transmitted in the at least one time window over the power line structure, thereby causing redundant information transmission**, wherein:

only the information from the first set of the information which is transmitted within the at least one time window over the databus structure is also transmitted over the powerline structure, and

the power line structure is not used to transmit the second set of information transmitted during the at least one event window.

Independent claims 12, 16, and 17 have been amended to recite subject matter substantially similar to the above-recited features of claim 11.

The Examiner contends that the term “cycle” can be broadly interpreted to include any sequence of events or activities. In this regard, claims 11, 12, 16, and 17 have been amended to refer to **successive, pre-allocated communications cycles**. It should therefore be apparent that the claimed cycles cannot be simply any sequence of events.

The Examiner further contends that the term “information” can also be broadly interpreted. In this regard, claims 11, 12, 16, and 17 have been amended to indicate that **the first set of information is different from the second set of information**. Claim 12 has also been amended to recite “**wherein the first set of information includes at least one of time-critical information and safety-critical information and the second set of information includes information that is generated at unpredictable times.**”

The Examiner contends on p. 4-5 of the Office Action that: (a) “amended claim now recites ‘the power line structure is **not used** to transmit the **second set of information that is also transmitted** during the at least one window’”; and (b) the claims, as interpreted, appear to contradict one another because the time window and the event window may be interpreted to transmit the same information. It is a well-understood canon of claim construction that if a claim can be interpreted to sustain validity, then that particular interpretation should be favored over interpretations that would cause the same claim to be invalid. Thus, it is respectfully submitted that an overly broad interpretation, such as the Examiner’s interpretation of the term “information,” which would cause conflicts amongst claims, is not a “reasonable interpretation.” In any case, in order to obviate any potential ambiguity, the independent claims 11, 12, 16 and 17 have been amended at least to the effect that the first set of information (transmitted in time windows) is different from the second set of information (transmitted in event windows), and dependent claim 24 has been amended to delete the word “also” from the limitations, i.e., amended claim 24 now recites that “the power line structure is **not used** to transmit the **second set of information that is transmitted** during the at least one window,” and therefore dependent claim 24 and the parent claim 17 do not contradict one another. With respect to the term “different” as used in amended independent claims 11, 12, 16 and 17, it should also be noted that “different” is not necessarily the same as “completely different,” so that a partial overlap between information of the first and the second sets is entirely consistent with the claim language.

The Examiner contends that col. 5, lines 45-51 of Timmerman discloses redundant information transfer. However, the cited section only refers to simultaneous transfer using the primary communications bus and the secondary power bus. Simultaneous is not synonymous with redundant. Nowhere does Timmerman suggest that the **same information** is being transferred over both buses.

Additionally, even if Timmerman did teach redundant transfer (which is clearly not the case), Timmerman still fails to teach **redundantly transferring a subset of the total information transferred**, i.e., redundantly transferring the portion of information from the first set that was transmitted during time windows, while ignoring information transmitted during event windows. In other words, Timmerman does not disclose, or even suggest, subdividing the information in the first information set and the second information set, so that only the portion of the first set that was transmitted during the time windows is transmitted over both the powerline structure and the databus structure.

Transmitting only the first information set during the time windows over the powerline structures reduces the required bit rate for transmissions over the powerline structures. Communication circuitry such as transceivers used for transmitting over the powerline structure can therefore be made simple and inexpensive.

Thus, Timmerman fails to teach or suggest **“transmitting at least one portion of the first set of the information transmitted in the at least one time window over the power line structure, thereby causing redundant information transmission.”**

Weigl fails to remedy the deficiencies of Timmerman as applied against claims 11, 12, 16 and 17. Accordingly, even if the proposed combination of Weigl and Timmerman were proper, the proposed combination does not render obvious independent claims 11, 12, 16 and 17, as well as their dependent claims 15, 20, and 24.

In view of the foregoing reasons, it is respectfully requested that the obviousness rejection of claims 11, 12, 15-17, 20 and 24 be withdrawn.

III. Rejection of Claims 13, 14, 18, and 19 under 35 U.S.C. § 103(a)

Claims 13, 14, 18, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Weigl and Timmerman in view of Applicant Admitted Prior Art ("AAPA"). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

Claims 13 and 14 depend on claim 11. Claims 18 and 19 depend on claim 16. As discussed above, the combination of Weigl and Timmerman fails to render obvious claims 11 and 16. In addition, the AAPA clearly fails to remedy the deficiencies of Weigl and Timmerman as applied against parent claims 11 and 16. Accordingly, the overall teachings of Weigl, Timmerman and the AAPA cannot render dependent claims 13, 14, 18 and 19 obvious.

In view of the foregoing reasons, it is respectfully requested that the obviousness rejection of claims 13, 14, 18, and 19 be withdrawn.

CONCLUSION

In view of all of the above, it is respectfully submitted that all of the presently pending claims are allowable. A prompt, favorable action on the merits is respectfully requested.

Respectfully submitted,

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